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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,318	11/17/2006	Hiroshi Kubota	19036/41350	1107
4743	7590	12/09/2008		
MARSHALL, GERSTEIN & BORUN LLP			EXAMINER	
233 S. WACKER DRIVE, SUITE 6300			SAN MARTIN, EDGARDO	
SEARS TOWER				ART UNIT
CHICAGO, IL 60606				PAPER NUMBER
			2837	
			MAIL DATE	DELIVERY MODE
			12/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/550,318	KUBOTA, HIROSHI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Edgardo San Martin	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 November 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/23/05</u> .   | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

### ***Claim Objections***

1. Claims 14 and 18 are objected to because of the following informalities:
  - Claims 14 and 18 recite the limitation "the branch point" in lines 3 and 2, respectively. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 3, 5, 6, 11 and 19 - 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Adamson (US 2002/0014368).

With respect to claim 1, Adamson teaches a sound wave guide structure (Fig.1, Item 3) for a speaker system comprising a sound passage space connecting an inlet opening (Fig.1, Item 18) to an outlet opening (Fig.1, Item 19); the sound passage space being configured to branch in plural stages in a range from the inlet opening to the outlet opening to form a plurality of sound wave guide paths (Fig.1, Item 17) extending from the inlet opening to the outlet opening (Fig.1; ¶'s[0063] – [0067]).

With respect to claims 2, 3, 5, 6, 11 and 19 - 21, Adamson teaches the limitations described in the claims (Fig.1; ¶'s[0063] – [0067]).

3. Claims 1, 2, 4, 15 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Smythe (US 1,871,243).

Smythe teaches a sound wave guide structure (Fig.2) for a speaker system comprising a sound passage space (Fig.1, Item 21) connecting an inlet opening to an outlet opening; the sound passage space (Fig.3, Item 21) being configured to branch in plural stages in a range from the inlet opening to the outlet opening to form a plurality of sound wave guide paths (Fig.3, Items A, B, C, D) extending from the inlet opening to the outlet opening, wherein the plurality of sound wave guide paths extend in a line shape from the inlet opening to the outlet opening, and wherein center axes of the plurality of sound wave guide paths are included in a curved plane or a bent plane (Figs.1 and 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 – 10, 12 – 14 and 16 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adamson (US 2002/0014368) in view of Daniel (US 3,957,134).

With respect to claims 7 – 10, Adamson teaches the limitations discussed in a previous rejection, but fails to disclose wherein the outlet opening of the slit shape extends to be curved in a convex or concave curved line shape.

On the other hand, Daniel teaches a sound wave structure (Fig.1) wherein the outlet opening extends to be curved in a convex curved line shape (Fig.1).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Daniel configuration with the Adamson design because it would permit the sound waves coming out of the structure to be refracted in a desired way in this manner controlling the directivity of the sound waves in a predetermined frequency range.

Regarding claims 9 and 10, the Examiner considers that it would have been an obvious matter of design choice to provide the outlet opening extending to be curved in a concave curved line shape because it would also permit the sound waves coming out of the structure to be refracted in a desired way in this manner controlling the directivity of the sound waves in a predetermined frequency range; in this particular case, the sound waves would be directed to converge in a predetermined point, contrary to the convex shape that would widen the angle of reproduction.

With respect to claims 12 and 16 - 18, Daniel teaches wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening has a shorter path length (Fig.1); and wherein at least part of at least one of the plurality of sound wave guide paths extends in a S shape or wherein at least one of the plurality of

sound wave guide paths has a largest height in an intermediate region between the inlet opening and the outlet opening of the sound passage space (Fig.1).

With respect to claims 13 and 14, the Examiner considers that it would have been an obvious matter of design choice to provide wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening of the slit shape has a longer path length because it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

### ***Conclusion***

5. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

### ***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571)272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edgardo San Martin/

Edgardo San Martín  
Primary Examiner  
Art Unit 2837  
Class 181  
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Art Unit: 2837

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